

CHITWAN HABITAT RESTORATION PROJECT

**Final Technical Report
(March 10 to 31st October, 1997)**

**Submitted to:
World Wildlife Fund, US**

**By:
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I. INTRODUCTION

Chitwan, a sub tropical valley cradles between the Churia hill (Siwalik) and Mahabharat range within central Nepal. The Royal Chitwan National Park, a world heritage site, is home to the second largest population of the greater one horned rhinoceros as well as the largest concentration of tigers within Nepal. However, Chitwan is equally bestowed with numerous problems, the high turn over of in-country migration in search of better land in the early sixties coupled with higher population growth rate has been posing a serious problem for biodiversity conservation. The luxuriant forests adjacent to the National Park which once used to have abundant wildlife have either been encroached by settlers or left in a seriously degraded form due to over-exploitation.

Realizing this, the King Mahendra Trust for Nature Conservation initiated buffer zone community plantation activities through it's local arm, the Nepal Conservation Research and Training Center, which is working in the field of Research, Training and Community oriented conservation activities. By the end of 1996 this project has been able to restore more than 1500 ha of seriously degraded forest lands adjacent to RCNP with active peoples' participation. These extended habitats have served dual objectives: firstly it has tremendously helped the local people by providing fodder and fuel-wood and secondly the extended habitats have now been colonized by the park animals, thereby enhancing bio-diversity.

II. PROGRAMS UPDATE

Activities from March 10 to 31st October, 1997

a) Site Selection for Habitat Restoration:

Kuchkuche Area:

The Kuchkuche Area is located at the eastern side of Chitwan District. Two VDCs namely Bhandara and Kathar are the main settlements around this habitat. This Area used to be a

good forest and thus a good habitat for rhino and sambers. In 1990, nine rhinos were captured from this area for translocation to Royal Bardia National Park located in the far western Nepal. However, the floods of 1991 had seriously damaged the forest affecting the wildlife and the natural settings of this area. Gradual encroachment from local people and overgrazing reduced the understory vegetation. Once abundant wildlife could be hardly seen now. Due to loss of understory vegetation, local people seriously suffered from acute shortage of fodder and fuel-wood. Experiencing these difficulties and hearing more about community forest specially of Baghmara, the villagers decided to develop community forest in this area.

From management perspective they divided the whole Kuchkuche forest into four blocks. One of the block falls within the border of Bhandara VDC. The remaining three blocks, which cover a total of 421.62 ha, fall within Kathar VDC. The Community decided to manage each block from not more than four ward of the VDC according to their accessibility. These three blocks are now known as Kusana-Gothauli (61.35 ha.), Kantheswari (257.74 ha.) and Kuchkuche (102.53 ha.) Community Forests.

In line with our policy of expanding habitat around the Royal Chitwan National Park, NCRTC has chosen the Kantheswari Community Forest Site for Chitwan Habitat Restoration Project for this year.

b) User's Group Selection:

The residents of Kathar VDC ward number 2 , 3 and 5 are the members of the User Group of Kanteswari community forest. Ward number 5 was not included earlier has now been included in the Users group. The total household in the Users area (wards no. 2,3, &5) is 471 with a total population of 2926.

c) General Assembly:

A general assembly of the Users Group was called on 13 September, 1997. The assembly has included a women (Mrs. Somia Chaudhari) in the main committee. They also decided to encourage women's' participation in the program and invite more women to represent in the main committee. Another interesting thing of the assembly is that they had also encouraged a tribal group named Chepang in their main committee representing as a joint-secretary. They also decided to include ward no 5 of Kathar VDC in user group. Earlier only ward number 2 and 3 were included in the users group. The assembly passed budget for the fiscal year 2054/55 (1997/98). The annual income, expenditure and activities of the community was also disclosed to the User group by the main committee to maintain transparency.

I) Plantation

Within this year a total of 150 ha area has been fenced for natural regeneration and plantation. Although the site is seriously degraded due to grazing and other activities, based on our experts suggestion a large portion is allocated for natural regeneration and plantation is also done in certain area at the end of July. A total of 1,00,000 saplings of fast growing fodder and fuelwood species were planted. The local user group contributed in clearing the plantation site, digging pits for plantation and in planting saplings. On top of it the local users also dug out rhino proof trenches throughout the northern and western side of the plantation site to keep rhinos and other wild animals out of the plantation site. Initially it was planned to fence the whole 150 ha stretch, however after deliberations with the user group and field analysis the northern and western part has been fenced and the eastern part has been kept open for animal movement. This part could be fenced next year if it is found necessary.

i) Detailed Survey of UG:

NCRTC has completed the detailed survey of the UG. A total of 471 household with 2920 families are the prime users. Out of which 1495 are males and 1425 are females. The

domestic stock is 9191, which includes cattle, buffaloes, goats/sheep, pigs ducks and chickens. For detail profile of the UG , please refer appendix I.

Survey of wildlife resource:

As part of the database strengthening program a detailed wildlife survey of major animals and birds was conducted in September to have a baseline information which could be used to see impact of the project intervention in the future. Although plantation activities concluded in July, it was not possible to conduct survey due to the heavy monsoon because the heavy rain would wash out evidences of wildlife. So, immediately after the monsoon a survey on major animals and birds was carried out in that area.

A total of twelve rhinos have been recorded in the whole of Kuchkuche forest area. The survey done in July and September shows differences in animal sighting. The number of rhino sighted in July was seven whereas in September it has gone up to twelve. Similarly, other associated animal species like chital (*Axis axis*) have doubled since then. The sighting of sambar in these areas also reflect a good comeback (for animal survey sheet refer appendix , II, III and VI). Similarly a total of 94 species of avian fauna have been recorded within the area (appendix V and VII).

iii) Tiger Monitoring:

Biological monitoring with special emphasis on tiger has been started. Within a two months period of protection, prey species like chital (*Axis axis*), wildboar (*Sus scrofa*) and more importantly the sighting of sambar(*Cervus unicolor*) species within this forest indicates a healthy trend of wildlife colonization. Once the habitat improves more prey species will colonize the area which attracts more tiger. NCRTC will continue monitoring of tiger in these areas using methods like the pug mark study and the camera trapping traps to record the tigers and prepare a updated profile of the tigers within the community forest.

iv) Tiger Poaching Data-base:

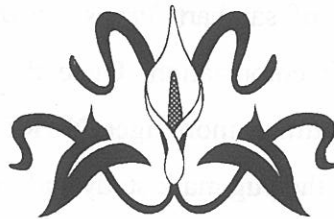
As part of the long term tiger monitoring program in Chitwan, NCRTC will maintain tiger poaching database. Information will be collected from National Park Office, District Forest Office, and other related institutions. The database will have information about the poaching sites, methods of poaching, date and site of poaching, age, and sex of the animal.

v) Tiger Count:

NCRTC will make a total count of tigers annually both within the community forest and within the study site of National Park. Our record shows a minimum of two tigers visiting the community forests in Kumrose and a male tiger has been recorded in the camera trap. Based on the count and with the poaching incidences we will be able to enumerate the population of tiger in Chitwan and its trend.

vi) Tiger Manual:

The tiger census manual is being given a final touch after collecting comments from different tiger experts. After necessary consultation with the in country tiger expert the process of translation is forwarded. It has already been started translating general things into Nepali. We expect it will take some time since a lot of deliberation and a general consensus built before embarking on translation.



Appendix: I.

Profile of Kantheswori Community forest

Name: Kantheswori Community forest.

Location: Eastern part of Chitwan District.

VDC: Kathar VDC.

Latitude: 27^o 34" 30.7"N

Longitude: 84^o 36" 19.74"E

Boundary:

East: Boundary of the Kathar VDC adjoining western boundary of the Bhandara VDC.

West: Private land of village of Kathar.

North: Kusuna and Gothauli Community forest boundary.

South: Kuchkuche Community forest boundary.

Total Area of the forest: 257.75ha.

Users Group area: Ward number 2, 3 & 5.

User Group Size: 471 household.

Users Population: 2920.

Total male population: 1495.

Total female population: 1425.

Male population between 1-15yrs.: 652.

Female population between 1-15yrs.: 596.

Male population above 16yrs.: 843.

Female population above 16yrs.: 829.

Livestock:

Total livestock: 9191.

Total cow: 192.

Total buffaloes: 479.

Ox and male buffalo: 213.

Goat and Sheep: 719.

Pigs: 14.

Chicken and Ducks: 7574.

*VDC=Village Development Committee.

Appendix no. II

King Mahendra Trust for Nature Conservation
Nepal Conservation Research and Training Center

Rhino survey in Kantheswari Community Forest

Date	Age/Sex						Total
	AM	AF	SAM	SAF	B-C	S-C	
23 Sept., 1997	1	4	0	1	0	2	8
24 Sept., 1997	0	6	0	3	0	2	11
25 Sept., 1997	1	4	0	2	0	1	8
Total observation	2	14	0	6	0	5	27
Total number of rhino	1	6	0	3	0	2	12

AM=Adult male.

AF=Adult.

SAM=Sub-adult male.

SAF=Sub-adult female.

BC=Big calf.

SC=Small calf.

Rhino survey in Kantheswari Community Forest

Date	Age/Sex						Total
	AM	AF	SAM	SAF	B-C	S-C	
18 March 1998	1	0	0	0	0	0	1

Appendix no. III.

**King Mahendra Trust for Nature Conservation
Nepal Conservation Research and Training Center
Sauraha, Chitwan.**

Name of observer:-Bishnu/ Kapil/ Bal Bahadur. **Date:-** 18 Mar 1998.

Time:- 8.30AM **Weather:-** Clear.

Location:- Kantheswari Community forest

Observation

S.No.	Name of Animal	Sighting	Pellet/ Dung	Pug mark	Scar/ scent	Vocalization	Others	Group/ Individual	Activity	Total
1	Rhino	1							Wallowing	
2	Sambar deer	3							Walking	
3	Chital	5							Standing	
4	Sloth bear						Hole			
5	Wild boar			3						
6	Monkey	8								
7	Rhino	1								
8	Jackal			1						
9	Small civet			1						
10	Brown squirrel	3								
11	Palm squirrel	2								

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Appendix no IV.

**King Mahendra Trust for Nature Conservation
Nepal Conservation Research and Training Center
Sauraha, Chitwan, Nepal.**

**(Animal Observation/Survey Sheet)
Animal Survey in Kantheswari Community Forest**

Name of observer:- Bishnu / Kapil.

Date:- 17 July 1997. Time:- 7.0 AM.

Weather:- Cloud.

Location:- Kantheswari Community Forest.

Observation:

SN	Name of Animal	Sighting	Pellet/ Dung	Pugmark	Scar/ scent	Vocalization	Others	Group/ Individual	Activity	Total
1	Rhino	7							Wallowing	7
2	Spotted deer	5							Grazing	5
3	Sambar deer									0
4	Wild boar			11						11
5	Sloth bear			2						2
6	Barking deer									0
7	Gray fox									0
8	R. Monkey	12							on tree	12
9	Common Mongoose	1							Walking	1
10	Porcupine			3						3
11	Rabbit		1							1
12	Brown Squirrel	1							on tree	1
13	Palm Squirrel	2							on tree	2
14	Hog deer			1						1

Name of observer:- Bishnu / Kapil/ Balbahadur.

Date:- 23 Sept. 1997. Time:- 6.30 AM.

Weather:- Clear.

Location:- Kantheswari Community Forest.

Observation:

SN	Name of Animal	Sighting	Pellet/ Dung	Pugmark	Scar/ scent	Vocalization	Others	Group/ Individual	Activity	Total
1	Rhino	12				Wallowing			wallowing	12
2	Spotted deer	10				Grazing			Grazing	10
3	Sambar deer	1				Standing			Standing	1
4	Wild boar			15						15
5	Sloth bear			5						5
6	Barking deer		2							2
7	Gray fox		1	1						1
8	R. Monkey	20							On tree	20
9	Common Mongoose	1	1						walking	1
10	Porcupine		1	4						4
11	Rabbit		1		3					4
12	Brown Squirrel	2							on tree	2
13	Palm Squirrel	2							on tre	2

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Appendix no.V

**Total Bird species observed in Kantheswari Community Forest
18 to 19 March 1998.**

SN	Bird species
1	Ashy wood Swallow
2	Barred Owlet
3	Baya Weaver
4	Black headed Oriole
5	Black headed Shrike
6	Black Drongo
7	Black Ilis
8	Blossom headed Parakeet
9	Brown Shrike
10	Black Redthroated Thrust
11	Changeable Hawk Eagle
12	Chestnut bellied Nuthatch
13	Chestnut Bittern
14	Common hawk Cuckoo
15	Collared budh Chat
16	Common Myna
17	Common Sandpiper
18	Collared scops Owl
19	Creasted serpent Eagle
20	Dull Green Leaf Wable
21	Dark Kite
22	Eurasian Kingfisher
23	Fulvous b. p Woodpecker
24	Gray headed Myna
25	Giant Hornbill
26	Green Bee eater
27	Green Barbet
28	Grey Tit
29	Hair crested Drongo
30	Hoopoe
31	Hodgson tree Pipit
32	Hodgson Prinia
33	Indian Ring Dove
34	Indian Roller
35	Indian Tree pie
36	Iora
37	Jungle Babbler
38	Jungle Crow

SN	Bird species
39	Jungle Myna
40	Jungle Owlet
41	Large Coucal
42	Large Parakeet
43	Lesser Adjutant Stork
44	Large cuckoo Shrike
45	Lesser wood shrike
46	Little Egret
47	Lesser Spotted Eagle
48	Leaf warbler species
49	Open billed Stork
50	Common Peafowl
51	Paddyfield Pipit
52	Pied Myna
53	Pied wood Shrike
54	Pond Heron
55	Purple Sunbird
56	Red breasted Flycatcher
57	Red capped Babbler
58	Red Jungle fowl
59	Bobin Dayal
60	Red thighed Falconet
61	Rose ringed parakeet
62	Red whiskered Bulbul
63	Stork billed Kingfisher
64	Scarlet breasted Sunbird
65	Small Coucal
66	Spotted Dove
67	Spotted Owlet
68	Small yellow naped Woodpecker
69	Tailor Bird
70	Verditer Flycatcher
71	White bellied Drongo
72	White breasted Kingfisher
73	White Eye
74	White necked Stork
75	White throated fantail flycatcher
76	Zitting Cisticola

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Appendix no.VI

Total bird Species observed in Kantheswari Community Forest

SN	Bird species
1	Ashy wood Swallow
2	Banded Bay Cuckoo
3	Barred Owllet
4	Baya Weaver
5	Black Drongo
6	Black headed Munia
7	Black headed Oriole
8	Black headed Shrike
9	Blossom headed Parakeet
10	Blue eared Kingfisher
11	Brooks Flycatcher
12	Brown hawk Owl
13	Brown leaf warbler
14	Chestnut Bittern
15	Chestnut bellied Nathatch
16	Chestnut headed Bee eater
17	Collared Bushchat
18	Common Myna
19	Common Peafowl
20	Common Hawk Cuckoo
21	Common Myna
22	Common Sandpiper
23	Crested Bunting
24	Crested Serpent Eagle
25	Crow billed Drongo
26	Dark Cuckoo Shrike
27	Dark Roller
28	Drongo Cuckoo
29	Emerald Dove
30	Eurasian Kingfisher
31	Fulvous breasted Pied Woodpeaker
32	Golden Oriole
33	Grey Tit
34	Grey crowned pigmy Woodpeaker
35	Grey headed Myna
36	Great horned Owl
37	Green Bee eater
38	Green Shank
39	Green Sandpiper
40	Hodgson Prinia
41	Hodgson Tree Pipit
42	House Crow
43	Indian Pitta
44	Indian Roller
45	Indian Tree pie
46	Indian Gallinule
47	Indian Ringed Dove

SN	Bird species
48	Intermediat Egret
49	Iora
50	Jungle Crow
51	Jungle Owlet
52	Jungle Babbler
53	Jungle Myna
54	Jungle Nightjar
55	Large Coucal
56	Large Cuckoo Shrike
57	Large Parakeet
58	Large Golden backed Woodpeaker
59	Lesser Wood Shrike
60	Lesser Adjutant Stork
61	Little Egret
62	Osprey
63	Pied Myna
64	Pied Wood Shrike
65	Pond Heron
66	Red breasted flycatcher
67	Red capped Babbler
68	Red Jungle Fowl
69	Red thighed faconet
70	Red vented Bulbul
71	Bobin Dayal
72	Rose ringed Parakeet
73	Scops Owl
74	Shrike
75	Small Coucal
76	Small Pied Kingfisher
77	Sparrow Hawk
78	Spotted Babbler
79	Spotted Dove
80	Spotted Munia
81	Spotted Owllet
82	Stork billed Kingfisher
83	Striated Babbler
84	Tailor Bird
85	Verditer flycatcher
86	White bellied Drongo
87	White breasted Kingfisher
88	White eye
89	White necked Stork
90	White throated Fantail Flycatcher
91	Wood Sandpiper
92	Yellow breasted Babbler
93	Yellow headed Wagtail
94	Zitting Cisticola

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Appendix no. VII

**King Mahendra Trust for Nature Conservation
Nepal Conservation Research and Training Center
(Animal Observation/Survey Sheet)**

Name of Observer:- _____ Date:- _____ Time:- _____

Weather:- _____ Location:- _____

SN	Name of Animal	Observation					Group/ Individual	Activity	Total
		Sighting	Pellet/Dung	Pugmark	Scar/ Scent	Vocalization			



Active Local participation in Plantation



Local people digging trench to keep rhinos out of the plantation area.